DEPARTMENT OF THE NAVY
NAVAL AIR SYSTEMS COMMAND
NAVAL AIR SYSTEMS COMMAND HEADQUARTERS
WASHINGTON, DC 20361 -0001

IN REPLY REFER TO
NAVAIRINST 4790.3B
AIR-411
19 Jun 90

NAVAIR INSTRUCTION 4790.3B

From: Commander, Naval Air Systems Command

Subj: AERONAUTICAL TIME CYCLE MANAGEMENT PROGRAM

Ref: (a) OPNAVINST 4790.2E, Naval Aviation Maintenance Program (NAMP)
(b) OPNAVINST 8600.2A, Naval Airborne Weapons Maintenance Program (NAWMP)
(c) NAVAIRINST 4790.20, Reliability Centered Maintenance (RCM) Program (NOTAL)
(d) NAVAIRINST 13120.1B, Fixed Wing Aircraft Structural Life Limits (NOTAL)
(e) NAVAIRINST 13130.1A, Rotary Wing Aircraft Structural Life Limits (NOTAL)
(f) NAVAIRINST 4730.10, Aircraft Service Period Adjustment (ASPA) Program (NOTAL)
(g) MIL-M-23618G, Manuals, Technical; Periodic Maintenance Requirements; Preparation and Printing of

Encl: (1) Periodic Maintenance Information Card Criteria

1. Purpose. To establish policy and responsibilities for the Naval Air Systems Command (NAVAIR) Aeronautical Time Cycle Management (ATCM) program.

2. Cancellation. This instruction supersedes NAVAIRINST 4790.3A of 1 December 1982 and form OPNAV 4790/29.

3. Scope. This instruction establishes the policies and assigns the responsibilities for implementation of the ATCM program for aircraft, weapon systems, and support equipment. It reaffirms the program objectives of references (a) and (b), which are to achieve maximum use of equipment consistent with flight safety, mission accomplishment, and economic operation. ATCM scheduled removal items are determined by the application of the Reliability Centered Maintenance (RCM) program, reference (c). The Logistic Support Analysis program process identifies all scheduled removal items within the equipment maintenance plan. ATCM scheduled removal items are those aeronautical time/cycle sensitive components, structures, assemblies, or modules that require removal from service at predetermined intervals for inspection, maintenance, repair, rework, or condemnation at a higher level of maintenance. ATCM specially tracked items are items which require special monitoring and failure trend analysis. These specially tracked items are designated by a cognizant field activity (CFA) or other field activity which has maintenance engineering responsibilities.

4. Background. The scheduled removal and inspection of components has always been a part of naval aviation maintenance. RCM analysis, reference (c), leads to the development of preventive maintenance tasks based on the reliability characteristics of the equipment. Preventive maintenance includes scheduled servicing/lubrication, inspections, and removal tasks. These tasks may be accomplished at any of the three maintenance levels. The ATCM program provides for the recording of historical maintenance data associated with forced removal items identified within the equipment's maintenance plan. It encompasses scheduled removal items and items having special tracking or information requirements. Fleet technicians record removals, installations, technical directive compliances (TDC's), and repairs on ATCM cards, returning the card to the appropriate depot or repair facility with the item when life cycle limitations are reached or higher level maintenance is required.

5. Information

a. Office of the Chief of Naval Operations (OPNAV) Form 4790/28A, Scheduled Removal Component (SRC) Card, contained in references (a) and (b), is the vehicle used to record the maintenance history of forced removal items.

b. OPNAV Form 4790/113, Equipment History Record (EHR) Card, contained in references (a) and (b), provides for the recording of maintenance history and performance data for specially tracked other than forced removal items. It was developed and implemented to fulfill the need of the CFA's to collect component history data.

c. Assemblies may also be time/cycle sensitive items, where the internal parts of the assembly have forced removal requirements. As the SRC card is designed to track components, OPNAV Form 4790/106A, Assembly Service Record (ASR), contained in reference (a), is designed to track assemblies.

d. Fleet implementation of the modular engine concept required the development of OPNAV Form 4790/135, Module Service Record (MSR) for tracking individual engine modules. This card is also contained in reference (a). An engine module or the internal components of a module may not be time/cycle sensitive, but the module must be tracked by an MSR.

e. An automated Aeronautical Time Cycle/Management Information System (ATC/MIS), formerly the central repository, is functionally managed by the Naval Aviation Maintenance Office (NAVAVNMAINTOFF) Code 322. The ATC/MIS maintains a master part number listing for all items included in the ATCM program. The ATC/MIS receives and stores historical data for SRC, ASR, and MSR designated items as they migrate through the depot maintenance level. It provides historical data to depot or fleet maintenance personnel, as required. Historical data for EHR items is maintained by the equipment's respective CFA. The ATC/MIS is an independent system automated under the Naval Aviation Logistics Data Analysis (NALDA) management information system. The data base

8465 2

currently receives continuous data from all three levels of maintenance and from manufacturers at the time of acquisition. Also, the ATC/MIS is designed to extract data from the Maintenance Material Management System (3-M) for designated items. All input data used for SRC, ASR, and MSR history record reconstruction undergoes manual screening. Access to the ATC/MIS is provided to all NALDA management information system users.

6. Policy. The ATCM program will be administered per specific guidance from the Naval Air Systems Command Headquarters (NAVAIRHQ) Logistics and Maintenance Policy Division (AIR-411). This program is specifically designed to support and follow the overall maintenance philosophy of references (a) and (b). References (a) and (b) also govern the ATCM program documentation procedures for naval aviation maintenance activities.

a. All aeronautical life limited components will be screened for ATCM program application. All program candidates will be analyzed to ensure compliance with the removal criteria provided in reference (c). Those candidates meeting the time/cycle sensitive requirements and those items as directed by references (d) and (e) will be tracked by applicable SRC, ASR, or MSR Cards under the ATCM program provided

(1) the item can be removed at the organizational or intermediate (O or I) maintenance levels;

(2) the item is removed at the depot (D) maintenance level and has the possibility of being interchanged among aircraft, weapons systems, or support equipment;

(3) the life limited item is not part of an assembly that has its own tracking system as authorized by references (a) and (b) or is not tracked within a Flight Information Recording and Monitoring System;

(4) the item is not of a short life duration with a local discard disposition making it impractical to track through a centralized system; and

(5) a structural life limited item meets the above criteria and is serialized (those structural life limited items which do not meet the ATCM program criteria must be monitored by OPNAV Form 4790/142, Structural Life Limits).

b. Life limited items removed as a function of depot level maintenance (DLM) must be listed in the appropriate section of each applicable aircraft Periodic Maintenance Information Card (PMIC). This also includes all structural life limited and time compliance items listed in references (d) and (e). DLM specifications and Aircraft Service Period Adjustment (ASPA) program, reference (f), specifications must reference the PMIC for applicable life limited items.

8465 3

c. All components assigned SRC, ASR, or MSR cards must be serialized. If a component has not been serialized, a serial number must be assigned prior to the start of data collection. The exceptions to the ATCM serialization policy are those items removed by depot only and once removed are discarded and not reinstalled, an item removed at depot which can only be reinstalled on the same aircraft or piece of equipment, or an unserialized depot structural life limited item which is tracked by OPNAV Form 4790/142. If necessary, these items can be tracked by aircraft bureau number or end item serial number.

d. Any component designated to be tracked within the ATCM program will be identified in the applicable PMIC with the type of history record (SRC, ASR, MSR, or EHR) to be maintained. Depot level life limited items must be specifically identified in the PMIC. It must also be noted depot life limited items listed in the PMIC do not require visual verification of component or assembly serial numbers during O and I level maintenance.

e. SRC, ASR, MSR, and EHR history records will accompany their related components as they migrate between maintenance activities. When installed, or in use, these history records will be maintained as part of the applicable logbook or Aeronautical Equipment Service Record (AESR). When in transit, the history records will be properly packaged inside the container with the component, its applicable logbook, or AESR.

f. Items designated as SRC, ASR, or MSR must be identified to the Naval Supply Systems Command (NAVSUPSYSCOM), Ships Parts Control Center (SPCC), and the Aviation Supply Office (ASO) for identification within the Master Repairable Item List, Master Item File, and the aviation Weapons System File.

g. Penalty and disposition instructions must be issued for equipment when SRC, ASR, and MSR cards are lost and historical data cannot be reconstructed.

7. Responsibilities

a. NAVAIRHQ

(1) AIR-411 will

(a) as ATCM Program Manager, provide policy, guidance, and monitor the performance of the overall program; and

(b) coordinate with OPNAV to ensure the ATCM program meets the operational needs of the fleet.

8465

4

(2) Logistics Management Division (AIR-410), Support Equipment Logistics Management Division (AIR-417), and Airborne Weapons Logistics Division (AIR-418) will

(a) ensure new procurement, modification, updated, and redesigned items are screened utilizing the RCM process, reference (c), for scheduled removal program applicability and promulgate implementation guidance, including serialization when applicable if the ATCM program responsibility has not transitioned to a field activity;

(b) ensure ATCM program requirements are included in commercial repair contracts and inter-service agreements; and

(c) as Assistant Program Managers, Logistics (APML's) and Logistics Managers (LM's) review all additions, deletions and changes to PMIC's, including ATCM program requirements, and if this program responsibility has not transitioned to a field activity approve these actions.

(3) Systems Engineering Management Division (AIR-511), Air Vehicle Division (AIR-530), Crew Systems Division (AIR-531), Propulsion and Power Division (AIR-536), Weapons Engineering Division (AIR-540), Avionics and Computer Resources Division (AIR-546), Reconnaissance and Imaging Systems Division (AIR-547), Ship and Shore Installations Division (AIR-551), and Support Equipment Division (AIR-552) will

(a) coordinate with NAVAIRHQ (AIR-411), APML's, LM's, CFA's, and NAVAVNMAINTOFF to ensure the ATCM program includes all applicable components, and structural life limited and time compliance items listed in references (d) and (e); and

(b) when applicable coordinate with NAVAIRHQ (AIR-411), APML's, LM's, CFA's, NAVAVNMAINTOFF, other NAVAIR field activities, and fleet activities concerning penalty and disposition instructions for equipment in which lost ATCM historical data cannot be reconstructed.

b. NAVAVNMAINTOFF will

(1) perform as functional manager in support of NAVAIRHQ (AIR-411), oversee the overall operation of the ATCM program, and evaluate the performance of the associated logistics and engineering support functions;

(2) coordinate with NAVAIRHQ, fleet, CFA's, contractors, and other agencies involved, to resolve conflicting issues concerning ATCM program policy or procedures;

8465 5

(3) ensure the ATCM process is being followed and scheduled removal candidates meet the ATCM program criteria established by existing NAVAIRHQ policy;

(4) coordinate the development and implementation of training requirements pertaining to program techniques and procedures;

(5) produce and distribute Program Master Component Listings as required to provide identification of components included within the ATCM program;

(6) provide SRC, ASR, and MSR master component listings to NAVSUPSYSCOM, SPCC, and ASO;

(7) review and incorporate CFA submittals for additions, deletions, and changes to the EHR master part number listing within the ATC/MIS; and

(8) budget for and maintain the ATC/MIS, its automated processes, and related special program improvement projects. The ATC/MIS responsibilities include

(a) determination of initial course of action for missing SRC, ASR, and MSR history record data;

(b) acting as the central coordination point for reconstruction of SRC, ASR, and MSR history record data;

(c) review of PMIC's and Program Master Component Listings to ensure ATCM requirements are included; and

(d) coordinating with CFA's to reconcile differences and initiate any required revisions.

c. CFA's will

(1) ensure the designated ATCM program items meet the criteria of references (a) through (e) and this instruction;

(2) ensure components designated to be tracked under the ATCM program are listed in the applicable PMIC decks governed by reference (g) and to include the criteria contained in enclosure (1);

(3) ensure DLM specifications and ASPA specifications reference the applicable aircraft PMIC for life limited items, which includes ATCM program requirements;

8465

(4) develop and promulgate tracking implementation instructions, including applicable item serialization on newly designated SRC, ASR, or MSR items, in conformance with references (a) through (e) and this instruction;

(5) develop and maintain a data repository for respective EHR designated items, submit EHR changes, additions or deletions to NAVAVNMAINTOFF master part number listing. For newly designated EHR items include implementation instructions in respective aircraft PMIC's. Determine the initial course of action for missing EHR data and act as the central coordination point for reconstruction of EHR historical data;

(6) as necessary, assist the ATC/MIS for data reconstruction efforts;

(7) when applicable coordinate penalty and disposition instructions for equipment in which lost SRC, ASR, and MSR historical data cannot be reconstructed;

(8) re-evaluate program designated items by applying accrued data and experience, and revise requirements as applicable, then formally notify ATC/MIS of any revisions;

(9) ensure approved SRC, ASR, MSR, and EHR revisions are reflected in respective aircraft PMIC's;

(10) coordinate with NAVAVNMAINTOFF, NAVSUPSYSCOM, SPCC, and ASO to ensure program requirements are included in new procurement contracts as applicable; and

(11) ensure ATCM program requirements are included in commercial repair contracts and inter-service agreements.

d. Naval Aviation Depots and other Depot Repair Activities will

(1) maintain required records for items in standard depot level maintenance per procedures in references (a) and (b), and when utilizing data consolidation procedures for ATCM program items ensure the accuracy of data, both historical and current;

(2) upon completion of depot processing of program designated items, forward copies of SRC, ASR, and MSR Cards to the ATC/MIS on a bi-monthly basis;

(3) forward copies of EHR cards to the respective CFA on the established reporting basis; and

(4) assist the ATC/MIS and the applicable CFA with data reconstruction efforts as required.

8465 7 7

8. Forms. OPNAV 4790/28A, Scheduled Removal Component (SRC) Card, S/N 0107-LF-047-9142; OPNAV 4790/106A, Assembly Service Record (ASR), S/N 0107-LF-047-9531; OPNAV 4790/113, Equipment History Record (EHR) Card, S/N 0107-LF-047-9576; OPNAV 4790/135, Module Service Record (MSR) (Pages 1 through 4), S/N 0107-LF-047-9675; OPNAV 4790/142 Structural Life Limits, S/N 0107-LF-047-9710 are available in the Navy supply system and may be requisitioned per NPFC P-2002D.

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Periodic Maintenance Information Card Criteria

The Periodic Maintenance Information Card (PMIC) listing will conform to reference (g) and the following minimum criteria:

1. Each nomenclature will list all part numbers pertaining to the nomenclature that requires tracking. As a minimum, all basic part numbers must be listed. If all dash numbers under a basic part number carry the same requirements, the basic may be listed with a "-ALL" indicating all dash numbers under that basic have the same requirements. However if the requirement is different for any dash number under that basic, all dash numbers must be listed.

2. Each part number listed must list the appropriate time/cycle requirement for that part number. A time/cycle requirement contains three basic parts as follows:

a. Time Cycle Code - a code established by references (a) and (b) indicating the method by which time/cycle values are measured (hours, arrestments, etc.).

b. Time Cycle Value - the maximum time/cycle value allowed, after which the item must be removed.

c. Disposition - the disposition of the removed item after it has reached its maximum time/cycle value.

3. SRC items will be grouped together within the applicable section of the PMIC, clearly indicating the tracking vehicle, all time/cycle requirements, and respective CFA, if different from the aircraft, weapon system, or support equipment CFA. A note must be added to the Remarks column identifying all depot life limited items and stating these items do not require visual verification of component or assembly serial number during O and I level maintenance.

4. All ASR items will be grouped together within the applicable section of the PMIC, clearly indicating the tracking vehicle. All internal ASR time/cycle sensitive items will be listed under the respective ASR with their time/cycle requirements. A note must be added to the Remarks column identifying all depot life limited items and stating these items do not require visual verification of component or assembly serial number during O and I level maintenance.

5. MSR items will be grouped together within the applicable section of the PMIC, clearly indicating the tracking vehicle. If time/cycle requirements are not applicable, it will so state. A note must be added to the Remarks column

identifying all depot life limited items and stating these items do not require visual verification of component or assembly serial number during O and I level maintenance.

6. EHR items will be grouped together within the applicable section of the PMIC, clearly indicating the tracking vehicle and the respective CFA. If time/cycle requirements are not applicable, it will so state.

8465